

## Autumn 2018./2019.

| SCHOOL |  |
| :---: | :--- |
| TEAM NUMBER |  |
| CATEGORY |  |
| COMMISSIONER |  |


|  | Student's name and surname | Year | Mentor's name and surname |
| :---: | :---: | :---: | :---: |
| 1. |  |  |  |
| 2. |  |  |  |

ANSWERS:

| 3RD YEAR |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 3.1. | 3.6. |  | 3.13. |  |
| 3.2. | 3.7. |  | 3.14. |  |
| 3.3. | 3.8. |  | 3.15. |  |
|  | 3.9. |  | 3.16. |  |
|  |  | 3.17. |  |  |
|  |  | 3.18. |  |  |
|  | 3.19. |  |  |  |
|  |  | 3.20. |  |  |

## | М MTematika

www.matzelcic.com.hr
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Translator: Josip Kličinović, mathematics professor
CORRECT ANSWER: 10 pts
ANSWER ,,E": 0 pts
FALSE ANSWER: -2 pts
3.1. Evaluate $2+2 \cdot 2: 2 \cdot 2$

| A. | B. | C. | D. | E. <br> W | We don't want to <br> answer |
| :--- | :--- | :--- | :--- | :--- | :--- |

3.2. Increase the sum of 35 and 12 by their difference. What is the result?

3.3. For two lines that don't have any common point we say that they are:

| A. |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| perpendicular | B. | C. | D. <br> Carallel |  | E.We don't want to <br> answer |

## CORRECT ANSWER: 20 pts

## ANSWER ,, ${ }^{*}$ : 0 pts

FALSE ANSWER : $-\mathbf{4} \mathbf{~ p t s}$
3.6. John used black and white tiles to make a chessboard. His little brother Charles took several tiles (look at the picture!). How many black tiles did Charles take?


| A. | B. | C. | D. | E. <br> We don't want to <br> answer |
| :--- | :--- | :--- | :--- | :--- | :--- |

3.7. The Croatian football team landed at the Zagreb Airport at $3: 31 \mathrm{pm}$. They arrived at the main square at $9: 25 \mathrm{pm}$. How many minutes did they travel from the airport to the main square?

| A. <br> Less than 300 min | B. <br> More than 400 min | C. | D. | E. <br> We don't want to <br> answer |
| :--- | :--- | :--- | :--- | :--- |

3.8. How many two-digit numbers are there, so that sum of their digits is equal to the tens digit?

| A. | B. | C. | D. <br> Can't be determined | E. We don't want to <br> answer |
| :--- | :--- | :--- | :--- | :--- | :--- |

3.9. Elisabeth is drawing symbols in the following sequence $\mathbf{\&} \downarrow \boldsymbol{Q} \downarrow \mathbf{Q} \downarrow \boldsymbol{Q} \boldsymbol{\cdots}$. What will be the 17 th symbol?

| A. | B. | C. | D. | E.We don't want to <br> answer |  |
| :--- | :--- | :--- | :--- | :--- | :--- |

## CORRECT ANSWER: 30 pts

## ANSWER „E": 0 pts

FALSE ANSWER : -6 pts
3.13. How many quadrilaterals are there in the following picture?


| A. | B. | C. | D. | E.We don't want to <br> answer |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

3.14. Domino tiles are small rectangular tiles split into two squares. These squares can be empty or have one to six dots. How many different domino tiles exist?


| A. | B. | C. | D. | E.We don't want to <br> answer |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

3.15. Eve has 16 colored papers. She cuts some of these papers into three parts. After that, Eve has 26 papers. How many papers did she cut?

| A. | B. | C. | D. | E. We don't want to |
| :---: | :---: | :---: | :---: | :---: |
| 5 | 10 | 6 | Can't be determined |  |

3.16. Allan tossed a dice (each side has one to six dots), and he wrote a result. In five tosses, the sum of all results was 28. How many times did the dice show the number 3 ?

| A. | B. | C. | D. | E. We don't want to |
| :---: | :---: | :---: | :---: | :---: |
| 0 | 1 | 2 | Can't be determined | ans |

3.17. Calculate the sum of all odd three-digit numbers with different digits (digits can't be repeated) written using digits 2,3 , and 5 .

| A. | B. | C. | C. | D. | E.We don't want to <br> answer |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

3.18. Susan lives on the farm, and she has many animals: 4 cows, 12 hens, 7 ducks, 5 pigs, 2 dogs, 3 cats, 2 fish, and 2 hamsters. How many legs do her animals have in total?

| A. | B. | C. | D. | E. | We don't want to <br> answer |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

3.19. If $\mathbf{\lambda}+5+\star+2+\star=\star+\star+10$ , calculate $\star$ ?

| A. | B. | C. | D. | Can't be determined | We don't want to <br> answer |
| :--- | :--- | :--- | :--- | :--- | :--- |

3.20. Anna has three rectangular tiles in different colors: blue $\square$, yellow $\square \square$ and red $\square$. How many different ways are there to place these tiles in order to cover a board with two rows and three columns?


| A. | B. | C. | D. | E.We don't want to <br> answer |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

